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Notes:

1. Untranslatable words are replaced with asterisks (***).
2. Texts in the figures are not translated and shown as it is.

Translated: 05:47:15 JST 12/16/2011

Dictionary: Last updated 11/09/2011 / Priority: 1. Chemistry / 2. Medical/Pharmaceutical sciences

FULL CONTENTS

[Claim(s)]

[Claim 1] A catalase protective agent which consists of essence of vegetation of a department of a chrysanthemum, Moraceae, Cucurbitaceae, Labiatae, Gramineae, Osmundaceae, Rutaceae, Caprifoliaceae, Equisetaceae, Typhaceae, a gromwell, a department of Houttuynia, or Umbelliferae.

[Claim 2] Vegetation of a department of a chrysanthemum An Anthemisia group, an Artemisia group, A Saponaria group, a Helianthus group, an Achillea group, In vegetation of a Stevia group and Moraceae, vegetation of a Morus group and Cucurbitaceae A Luffa group, Vegetation of Labiatae A Lavandula group, an Isodon group, a Thymus group, Vegetation of a Perilla group and Gramineae A Panicum group, a Prunus group, In vegetation of a Citrus group and a Japanese honeysuckle group, vegetation of a Lonicera group and Equisetaceae An Equisetum group, The catalase protective agent according to claim 1 whose vegetation of a Lithospermum group and a department of a ginseng vegetation of a Houttuymia group and a gromwell is [vegetation of Typhaceae] a Panax group in vegetation of a Typha group and a department of Houttuynia.

[Claim 3] Origin vegetation of essence Chamomillae flos, a mulberry, a sponge gourd, lavender, Artemisia montana, A sunflower, a barn grass, Isodon japonicus, a peach soapwort, a milfoil, The catalase protective agent according to claim 1 or 2 being an orange, Japanese honeysuckle, a field horsetail, Achillea millefolium, a sour orange, a beefsteak plant, lemon, KOGAMA, Houttuynia, Thymus serpyllum, stevia, MURASAKI, or a ginseng.

[Claim 4] A constituent containing one sort chosen as any of Claims 1-3, or the 1st paragraph from a catalase protective agent of a description, or two sorts or more for aging prevention.

[Claim 5] The constituent according to claim 4 being foodstuffs or a cosmetic.

[Claim 6] The constituent according to claim 4 or 5 being a cosmetic.

[Claim 7] The constituent according to any one of claims 4 to 6, wherein aging is that in which light irradiation participates.

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to constituents, such as a cosmetic containing the catalase protective agent and it which can eliminate the hydrogen peroxide which has influence detailed and big

to aging of the skin about the constituent for aging prevention containing a catalase protective agent and this, and can prevent aging of the skin for aging prevention.

[0002]

[Description of the Prior Art]Catalase is water and an enzyme disassembled into oxygen.

It has the operation which disassembles the hydrogen peroxide produced according to aging by a hydroxy radical, an operation of SOD, etc., and it is surmised that it has played the big role in aging prevention.

However, for this reason, catalase did not have few cases where aging was promoted by light that there are not few cases where that work is checked on the occasion of what is called photoaging in which light participates by light irradiation, such as ultraviolet radiation, since it is easily deactivated. Under light irradiation, according to inflammation etc., it was in the environment where production of hydrogen peroxide is promoted, and when deactivation of such catalase considered skin aging, it had become a big problem.

[0003]In addition, hydrogen peroxide is also reactive oxygen species [not only] long-life in itself, but a precursor of the hydroxy radical said for reactivity to be high and to be the most harmful in radical species. Since a hydroxy radical denaturalizing and decomposing collagen, elastin, hyaluronic acid, etc. which are dermis matrix components, and polymerizing is known, when long-life hydrogen peroxide is accumulated into the skin, A skin composition component is attacked via a hydroxy radical, and promoting aging of the skin is considered enough. It is checked that the operation of hydrogen peroxide which it not only does serious hindrance, but decomposes DNA to the cutis fibroblast which makes a skin composition component is also strong. According to the in vitro experiment in the second-half product (AGEs) of a Maillard reaction in which having deposited for the dermis matrix component of a crease generation portion is known, it is also reported that the generation is promoted with hydrogen peroxide. A role [in / at this meaning / the aging prevention of catalase] is not small.

[0004]Thus, it is thought that it is one of the major factors of skin photoaging, such as a cause of crease generation, that hydrogen peroxide harmful to the skin is accumulated with the time of UV irradiation or aging. Therefore, it is thought that it is very important to eliminate hydrogen peroxide when preventing aging of the skin. However, it was most which paid its attention to lipid-peroxidation inhibition, super oxide, the hydroxy radical, or the anti-oxidant, and the conventional anti aging agent had very many that paid their attention to elimination of hydrogen peroxide. That is, it can be said that the importance of anti-aging and the importance of catalase did not have the way of thinking which ties these up although recognized in the former.

[0005]On the other hand, in fields, such as a cosmetic, the aging which starts a wrinkle and **** was important problem, and prevention of this thing was long big problem. Also in functional foodstuffs, such as health food, this was the same.

[0006]

[Problem to be solved by the invention]Then, we developed the anti aging agent which protects the catalase which eliminates hydrogen peroxide aiming at development of a more effective anti aging agent. Therefore, there is the purpose of this invention in providing the constituent for aging prevention, such as a cosmetic for aging prevention which prevents and improves aging of the skin containing this, and foodstuffs for aging prevention, while it is excellent in prevention and the improving action of aging of the skin and provides a catalase protective agent with high safety.

[0007]

[Means for solving problem] This invention persons found out that it was important for prevention of the aging in which light participates to protect deactivation of catalase from light irradiation, as a result of stepping up research efforts wholeheartedly, in order to solve the above-mentioned problem. The result of having looked for the substance which has the anti-aging operation which protects the catalase which eliminates hydrogen peroxide from light irradiation based on this knowledge wholeheartedly, The department of a chrysanthemum, Moraceae, Cucurbitaceae, Labiatae, Gramineae, Osmundaceae, Rutaceae, Caprifoliaceae, The vegetation of Equisetaceae, Typhaceae, a gromwell, the department of Houttuynia, or the Umbelliferae, and more particularly an Anthemisia group, A Morus group, a Luffa group, a Lavandula group, an Artemisia group, A Helianthus group, a Panicum group, an Isodon group, a Prunus group, A Saponaria group, an Achillea group, a Citrus group, a Lonicera group, An Equisetum group, a Perilla group, a Typha group, a Houttuymia group, Essence of the vegetation of a Thymus group, a Stevia group, a Lithospermum group, and a Panax group, the extract especially obtained preferably using a specific solvent, or its solvent elimination thing found out having a strong catalase protective action, and completed this invention.

[0008] This invention Namely, the department of a chrysanthemum, Moraceae, Cucurbitaceae, Labiatae, Gramineae, Osmundaceae, The vegetation of Rutaceae, Caprifoliaceae, Equisetaceae, Typhaceae, a gromwell, the department of Houttuynia, or the Umbelliferae, Preferably An Anthemisia group, a Morus group, a Luffa group, A Lavandula group, an Artemisia group, a Helianthus group, A Panicum group, an Isodon group, a Prunus group, a Saponaria group, An Achillea group, a Citrus group, a Lonicera group, an Equisetum group, A Perilla group, a Typha group, a Houttuymia group, a Thymus group, Essence of the vegetation of a Stevia group, a Lithospermum group, and a Panax group, Preferably these vegetation Water, alcohols, polyols, ester, Nitrile, ether, ketone, Constituents containing the catalase protective agent and this which contain the extract produced by extracting using one sort or two sorts or more of solvents chosen from halogenated hydrocarbon and/or its solvent elimination thing as an active principle, such as a cosmetic for aging prevention and foodstuffs, are provided.

[0009]
[Mode for carrying out the invention] (1) The catalase protective agent of catalase protective agent this invention of this invention is essence of the above-mentioned vegetation. With essence, the very thing of some or all of a plant body and these are dried here, The extract or the solvent elimination thing of an extract which added the solvent to the workpiece, plant body, or workpieces which were processed, such as grinding and a fragment, and was extracted, [these] [what that means general terms, such as fractionation and a refined refining thing, is preferred as a catalase protective agent of this invention] The extraction from the vegetation concerned extracts using one sort or two sorts or more of solvents chosen from water, alcohols, polyols, ester, nitrile, ether, ketone, and halogenated hydrocarbon, and solvent elimination is carried out if needed.

[0010] An extract has the operation which protects the activity of catalase, the component which prevents aging of the skin is included, and the catalase protective agent of this invention should just contain such a component. Therefore, although the catalase protective agent of this invention may make vegetation grind [judge, crush it and] and contain, it makes the extract which extracted said component with the solvent preferably contain as an active principle. some plant bodies with said specific component -- or it all comes out, and if it is, it can obtain without gradual limitation, for example, a root, a stem, a leaf, a flower, fruits, a seed, etc. will be mentioned. These may use an independent part and may use two or more copies. The among these most desirable part is a leaf. As a solvent used for extraction, for example

Water, methanol, and ethanol, Alcohols, such as 1,3-butanediol, propylene glycol, and glycerol, Nitrile, such as ester, such as ethyl acetate and methyl formate, and acetonitrile, ketone, such as halogenated hydrocarbon, such as ether, such as diethylether and tetrahydrofuran, chloroform, and a methylene chloride, acetone, and methyl ethyl ketone, can be illustrated -- these one sort or two sorts or more -- what is necessary is independent, to mix and just to use The among these most desirable things are alcohols. The method of extraction adds a 2-10-times the amount solvent to a vegetable dry matter and its grinding thing, and if it is a room temperature, if it is the temperature near a boiling point, it should just immerse for several days for several hours, for example. What is necessary is to remove discard and just to carry out vacuum concentration by the back fault of it, etc. Column chromatography may refine this in the column filled up with a silica gel, ODS, an ion exchange resin, etc.

[0011](2) The constituent for the aging prevention of constituent this invention containing the catalase protective agent of this invention for aging prevention contains the above-mentioned catalase protective agent. As a constituent of this invention, catalase of this invention can be applied without special limitation, if the delivery of the protective agent can be carried out to in the living body, and as a desirable form, applying to foodstuffs or cosmetics is especially preferred, and it is mentioned.

[0012]As cosmetics by which this invention is applied, dosage forms and a use in particular are not limited, for example, any, such as solution form, the shape of a milky lotion, creamy, and the shape of aqueous gel, may be sufficient as dosage forms, and they can mention charges of finishing, such as foundation and a control color, besides the charge of a foundation as a use. These cosmetics can be manufactured by the same method as the usual cosmetics except blending the above-mentioned catalase protective agent.

[0013]Although the content in particular of the above-mentioned catalase protective agent is not limited, it is still more preferred that 0.01 to 10 weight % contains for cosmetics in 0.05 to 5weight % of the range from a viewpoint of producing decline in percutaneous absorption efficiency at effective concentration and high concentration desirable still more preferably. the various components generally used for the cosmetics of this invention at cosmetics -- that is, Ester, such as hydrocarbons, such as vaseline and microcrystallin wax, jojoba oil, and spermaceti, Higher alcohols, such as triglyceride, such as beef tallow and olive oil, cetanol, and oleyl alcohol, Polyhydric alcohols, such as fatty acid, such as stearic acid and oleic acid, glycerol, and 1,3-butanediol, A nonionic surface active agent, an anionic surface active agent, a cationic surface active agent, an amphoteric surface active agent, Thickeners, such as ethanol and Carbopol, antiseptics, an ultraviolet ray absorbent, an anti-oxidant, a pigment, fine particles, perfume, an anti-oxidant, a pH adjuster, a chelating agent, antiseptics or an ultraviolet radiation protective agent, an anti-inflammatory agent, a whitening agent, etc. can be blended as an optional component.

[0014]As foodstuffs, although it changes with kinds of essence similarly, it is preferred that 0.01 to 10 weight % makes it contain in 0.05 to 5weight % of the range from a viewpoint of producing decline in absorption efficiency at effective concentration and high concentration desirable still more preferably. Although it is also applicable to the usual foodstuffs as foodstuffs, applying to health food etc. is preferred. Also in these foodstuffs, arbitrary components can be contained and tension agents, such as an excipient, a binder, coating material, lubricant, a glyocalyx agent, disintegrator, an extender, correctives, emulsification, solubilization and a dispersant, a stabilizer, and a pH adjuster, etc. can illustrate preferably as arbitrary components, for example.

[0015]The constituent of above-mentioned this invention should surpass the prophylactic action of

aging, and the prophylactic action of the aging in which light especially participates. Being used for such the purpose is preferred.

[0016]

[Working example] Although the working example of this invention is given and being explained still in detail hereafter, this invention does not receive limitation only in these working examples. All the things that % used for below does not mention specially are weight %.

[0017]<Working example 1> The ethanol solution 5l was added to 3 kg of green leaves of chamomillae flos (Anthemisia group) 80%, heating channeling back was carried out for 2 hours, the vacuum concentration of the discard was removed and carried out by filtration, and 49g of catalase protective agents 1 of this invention were obtained. With the same method, A mulberry. The catalase protective agent 2 from a (Morus group), a sponge gourd. The catalase protective agent 3 from a (Luffa group), lavender. The catalase protective agent 4 from a (Lavandula group), the catalase protective agent 5 from Artemisia montana (Artemisia group), the catalase protective agent 6 from a sunflower (Helianthus group), the catalase protective agent 7 from a barn grass (Panicum group), Isodon japonicus. The catalase protective agent 8 from a (Isodon group), a peach. The catalase protective agent 9 from a (Prunus group), a soapwort. The catalase protective agent 10 from a (Saponaria group), the catalase protective agent 11 from a milfoil (Achillea group), the catalase protective agent 12 from an orange (Citrus group), the catalase protective agent 13 from Japanese honeysuckle (Lonicera group), a field horsetail. The catalase protective agent 14 from a (Equisetum group), the catalase protective agent 15 from Achillea millefolium (Achillea group), the catalase protective agent 16 from a sour orange (Citrus group), the catalase protective agent 17 from a beefsteak plant (Perilla group), lemon. The catalase protective agent 18 from a (Citrus group), KOGAMA. The catalase protective agent 19 from a (Typha group), Houlttuynia. The catalase protective agent 20 from a (Houlttuymia group), the catalase protective agent 21 from Thymus serphyllum (Thymus group), the catalase protective agent 22 from stevia (Stevia group), the catalase protective agent 23 from MURASAKI (Lithospermum group), The catalase protective agent 24 from the ginseng (Panax group) was obtained.

[0018]<Working example 2> 49 g of the catalase protective agent 1 is distributed and dissolved at the water 1l, it charges in the column filled up with DAIA ion HP-20, and the water 2l is poured and washed, and you poured the ethanol solution 5l 50%, and made it eluted. This thing was condensed and the 22-g catalase protective agent 25 was obtained.

[0019]<Working example 3> The fragment of 3 kg of the dry entire plants of a ginseng (Panax group) was carried out, 10 l. of ethanol was added 50%, it returned for 2 hours, vacuum concentration was filtered and carried out, and the catalase protective agent 26 of 76-g this invention was obtained.

[0020]<Working example 4> Measurement of an anti-aging operation (measurement in vitro of catalase activity)

Hydrogen peroxide is disproportioned by catalase and generates water and oxygen. Since that amount of development oxygen was proportional to the quantity of catalase, it measured the catalase protective action using this principle. Namely, 1.2 ml of hydrogen peroxide solutions prepared to 0.02M are taken in the cell of an oxygen electrode meter, When the solution temperature in a cell warmed with the water bath amounted to 30 **, cow liver origin catalase 10units was contained, solution 50mul whose catalase protective agent 50mug content this invention does was injected into the cell, and the amount of development oxygen per minute was measured. The examination division which did 50microl pouring only of the catalase liquid which does not contain a catalase protective agent as standard was prepared.

Operation with the same said of the solution which irradiated with ultraviolet A (BLB ramp; made by Toshiba Corp.) for 1 hour was performed about both the catalase protective agent examination division and the standard examination division.

[0021]A result is shown in Table 1. The oxygen yield of the non-glaring catalase protective agent examination division when the oxygen yield of a non-glaring standard examination division is made into 100% was calculated as addition activity residual ratio, and the oxygen yield of the exposure catalase protective agent examination division to a non-glaring catalase protective agent examination division was similarly calculated as exposure activity residual ratio. Next, it asked for the product of addition activity residual ratio and exposure activity residual ratio as the total residual ratio, and the catalase protective action was evaluated. In the example of control which performed light irradiation only to catalase, catalase was falling to 22.5%.

[0022]

[Table 1]

| サンプル | 添加活性残存率 (%) | 照射活性残存率 (%) | 總残存率 (%) |
|-------------|----------------|----------------|-------------|
| カタラーゼ保護剤 1 | 80.6 | 87.5 | 78.6 |
| カタラーゼ保護剤 2 | 78.1 | 83.1 | 72.7 |
| カタラーゼ保護剤 3 | 98.6 | 80.1 | 78.0 |
| カタラーゼ保護剤 4 | 90.6 | 75.9 | 68.8 |
| カタラーゼ保護剤 5 | 72.7 | 86.1 | 62.6 |
| カタラーゼ保護剤 6 | 92.9 | 80.9 | 75.2 |
| カタラーゼ保護剤 7 | 94.0 | 94.9 | 89.2 |
| カタラーゼ保護剤 8 | 87.0 | 88.5 | 85.8 |
| カタラーゼ保護剤 9 | 84.1 | 82.2 | 68.1 |
| カタラーゼ保護剤 10 | 97.6 | 82.5 | 80.4 |
| カタラーゼ保護剤 11 | 88.3 | 97.3 | 85.9 |
| カタラーゼ保護剤 12 | 83.8 | 74.1 | 69.5 |
| カタラーゼ保護剤 13 | 74.4 | 84.4 | 62.8 |
| カタラーゼ保護剤 14 | 87.9 | 77.1 | 67.6 |
| カタラーゼ保護剤 15 | 83.7 | 94.7 | 78.3 |
| カタラーゼ保護剤 16 | 88.6 | 83.8 | 74.2 |
| カタラーゼ保護剤 17 | 80.1 | 89.5 | 71.7 |
| カタラーゼ保護剤 18 | 95.4 | 72.4 | 68.1 |
| カタラーゼ保護剤 19 | 98.5 | 69.8 | 68.8 |
| カタラーゼ保護剤 20 | 82.8 | 80.1 | 66.3 |
| カタラーゼ保護剤 21 | 78.8 | 94.1 | 74.2 |
| カタラーゼ保護剤 22 | 67.0 | 97.2 | 65.1 |
| カタラーゼ保護剤 23 | 81.5 | 75.4 | 61.5 |
| カタラーゼ保護剤 24 | 96.1 | 63.4 | 60.9 |
| カタラーゼ保護剤 25 | 86.3 | 98.4 | 84.9 |
| カタラーゼ保護剤 26 | 91.2 | 74.3 | 67.8 |

[0023]It turns out that it has a catalase protective action from the light which was excellent in the extract of the specific vegetation which is a catalase protective agent of this invention from this result. It turns out that it can prevent catalase's being decomposed by light and preventing prevention of aging from this by the catalase protective agent of this invention.

[0024]Five <working-example 5> hairless mouse 1 groups were used, and the aging depressant action in the photoaging model by ultraviolet radiation was investigated. That is, after the hairless mouse applied 0.1 ml of 50% ethanol solutions which contained the catalase protective agents 1, 5, and 7 of the working example 1, and the extractives powder of 8** 0.1% and processed them, it irradiated with the 1/3-times the amount ultraviolet radiation (BLB ramp; made by Toshiba Corp.) of MED. Perform eight weeks of this work at five rate/one week, and the status of the elasticity of the skin is compared with UV irradiation and the average level of the control group which did not perform sample administration, ++: -- very elastic **: with +:elasticity -- a little, [elasticity] [the thing basis that elimination and elimination of -:elasticity are remarkable] the dullness of the color of skin -- the same -- ++: -- almost clear +: -- **: by which dullness is controlled -: by which dullness is controlled a little -- the controlling

[dullness] basis estimated. The group which applied the 50% ethanol solution which contained the powder which processed ascorbic acid or tea leaves like the catalase protective agent 1 as comparison and contrast 0.1% was also provided. A result is shown in Table 2. This shows that the extract of the specific vegetation which is a catalase protective agent has a prophylactic action of aging by light in a photoaging model.

[0025]

[Table 2]

| サンプル | 弾力消失抑制 | くすみ抑制 |
|------------|--------|-------|
| カタラーゼ保護剤 1 | ++ | ++ |
| カタラーゼ保護剤 5 | ++ | ++ |
| カタラーゼ保護剤 7 | ++ | ++ |
| カタラーゼ保護剤 8 | ++ | ++ |
| アスコルビン酸 | ± | + |
| 茶抽出物 | + | ±～+ |

[0026]Face toilet was produced by the formula shown below in <the working example 6>. That is, churning solubilization of the ingredient was carried out at the room temperature, and face toilet was obtained. I had bis die use carried out for one month the morning and evening, and had prevention and the improvement effect of that dullness evaluated about this face toilet using the panelist 1 group trinominal with hitting [much] ultraviolet radiation in external work in summer which worries about dullness. a valuation basis -- marks 2: -- remarkable prevention and improvement, and marks 1: -- distinct prevention and improvement, and marks 0.5: -- it is a basis without slight prevention and improvement, and a marks 0:improvement. As control, what substituted what substituted the extractives powder of the catalase protective agent 8 by water by the extractives powder of the tea extracted by the same method as the catalase protective agent 8 as comparison was used. A result is shown in Table 3. From this, it was accepted that the face toilet containing the catalase protective agent of this invention has an effect in prevention and an improvement of aging of dullness etc.

Extractives powder 0.1 weight-section 1,3-butanediol 5 of the catalase protective agent 8 Weight section glycerol 3 Weight section sodium citrate 0.1 weight-section methylparaben 0.2 weight-section ethanol 8 Weight section water 83.7 weight section [0027]

[Table 3]

| サンプル | 平均評点 |
|-------|------|
| 実施例 6 | 0.83 |
| 比較 | 0.24 |
| 対照 | 0.52 |

[0028]Cream was produced according to the formula shown below in <the working example 7>. That is, after having carried out the heating and dissolving of I, RO, and Ha to 80 **, respectively, and having added RO to I gradually, and also adding Ha and emulsifying, emulsification grains were equalized by the gay mixer, it cooled, and cream was obtained.

[0029]

b)

Squalane 10 weight-section cetanol 3 weight-section sorbitan sesquistearate 2 weight-section polyoxyethylene (20) behenyl-ether 2 Weight section vitamin A acid 1 weight-section RO

1,3-butanediol 5 [Weight section Ha] Extractives powder 0.1 of the weight section working example 2
Weight section carboxyvinyl polymer 0.3 Weight section water 40
Water 36.4 weight-section potassium hydroxide 0.2 weight section [0030]The tablet (health food) was created according to the formula shown below in <the working example 8>. That is, it tableted and the tablet was obtained, after carrying out fluid bed granulation and carrying out ventilation desiccation at 40 **, spraying ten weight sections of ethanol solutions on an ingredient 50%.
Hydroxypropylcellulose 8 Weight section catalase protective agent 26 Ten Weight section crystalline cellulose 40 weight-section lactose 30 weight-section starch 12 weight section [0031]The tablet (health food) was created according to the formula shown below in <the working example 9>. That is, it tableted and the tablet was obtained, after carrying out fluid bed granulation and carrying out ventilation desiccation at 40 **, spraying ten weight sections of ethanol solutions on an ingredient 50%.
Hydroxypropylcellulose 8 Weight section catalase protective agent 20 Ten Weight section crystalline cellulose 40 weight-section lactose 30 weight-section starch 12 weight section [0032]The tablet (health food) was created according to the formula shown below in <the working example 10>. That is, it tableted and the tablet was obtained, after carrying out fluid bed granulation and carrying out ventilation desiccation at 40 **, spraying ten weight sections of ethanol solutions on an ingredient 50%.
Hydroxypropylcellulose 8 Weight section catalase protective agent 12 Ten Weight section crystalline cellulose 40 weight-section lactose 30 weight-section starch 12 weight section [0033]
[Effect of the Invention]The catalase protective agent of this invention can be excellent in the protective action of the catalase which eliminates hydrogen peroxide, can demonstrate an effect to prevention and an improvement of the crease resulting from accumulation of hydrogen peroxide, etc., can prevent aging of the skin, and can maintain the status of a youthful skin.

[Translation done.]